# Press release

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## Water and weather experts come together to improve future flooding forecasts

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Sir John Harman, Chairman of the Environment Agency will open a new research centre at Wallingford on Tuesday, 5 December.

The Met Office is joining forces with the Centre for Ecology and Hydrology (CEH) to create a new research centre that will improve future forecasts of flooding.

The Joint Centre for Hydro-Meteorological Research is bringing together some of the nation's best meteorologists and hydrologists. They'll predict rainfall and river flow, and develop new prediction and forecasting systems for the Environment Agency.

The recent floods have underlined the importance of hydro-meteorological services and the new team will develop probabilistic forecasting models to enable more accurate risk assessments. Two joint projects are already under way.

The Met Office and CEH will develop a detailed map and model of soil wetness for the whole of the UK (5 km resolution). Using information from radars, satellites and rain gauges, as well as other real-time weather observations, the soil state map is updated every hour.

The soil wetness map means farmers will know when to irrigate and apply fertilisers, the military will know when to move heavy equipment, and flood forecasters will know how quickly rainfall will run into rivers. Weather forecasters also need to know today's soil wetness because it can influence tomorrow's weather.

Roderick Smith, the Met Office's Manager of Hydro-Meteorological R&D, said: "The recent wet autumn has shown how valuable the Met Office's weather radars and forecasting models are as tools for predicting the timing, extent and intensity of rainfall. Working alongside hydrologists at the Joint Centre for Hydro-Meteorological Research will enable us to improve our meteorological models to provide the best possible inputs to river flow forecasting systems."

Bob Moore, Head of the CEH's Modelling and Forecasting group, said, "Our models for forecasting soil moisture, river flows and floods are used by the Environment Agency to give timely warnings to the public and emergency services. Work at the Joint Centre will help us to improve their accuracy by making even better use of observed and forecast rainfall data. Joint research into how climate change could affect water resources and flooding events is also an exciting prospect."

Scientists at the Joint Centre are also developing a simple model which mimics many important features of the Met Office's complex global climate model. It gives climate change researchers a fast way of looking at the consequences of greenhouse gas emissions for water resources and eco-systems.

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